



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Watt

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,911	03/19/2004	Shigeru Yagi	119160	6375
25944 7590 09/17/2007 OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER KHAN, USMAN A	
			ART UNIT 2622	PAPER NUMBER
			MAIL DATE 09/17/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/803,911

Applicant(s)

YAGI, SHIGERU

Examiner

Usman Khan

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 1-7, 13-17 and 19-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-12 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 3/19/2004 and 1/27/2005 have been considered by the examiner. The submissions are in compliance with the provisions of 37 CFR 1.97.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Election/Restrictions

Applicant's election with traverse of the species restriction in the reply filed on 07/09/2007 is acknowledged. The traversal is on the ground(s) that the search and examination of the entire application could be made without serious burden.

The election requirement is improper because the Office offers no evidence demonstrating the conclusions of distinctiveness between inventions. MPEP; 803 states:

There are two criteria for a proper requirement for restriction between patentably distinct inventions:

(1) The inventions must be independent or distinct as claimed; and

(2) There must be a serious burden on the examiner if restriction is not required.

The Office has not carried its serious burden by demonstrating prima facie evidence supporting independent inventions. MPEP 803 states that for "purposes of the initial requirement, a serious burden on the examiner may be prima facie shown if the examiner shows by appropriate explanation either separate classification, separate status in the art, or a different field of search." The Office offers no such prima facie evidence. The current Action provides no indication of separate classifications for the two Species. No comments are made regarding a separate status in the art. There are no remarks suggesting that different fields need to be searched for each invention and listing those fields in conjunction with the Species.

Reason 2: Without Carrying Its "Serious Burden", Office Must Examine Entire Application

MPEP 803 states:

If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to distinct or independent inventions.

Applicant contends that both Species can be conveniently searched and examined together without burden to the Office. Accordingly, the Office must examine

the entire application on the merits, even though it might include claims to distinct or independent invention.

This is not found persuasive because it is noted that there are at least two different restriction requirements. They are "Species" and "Related Inventions". See MPEP § 808. In election of "Species", the showing of "separate classification", "separate status in the art", or "a different field of search" is not required.

It is recognized that there are two criteria for a proper requirement for restriction between patentably distinct inventions:

- (1) The inventions must be independent or distinct as claimed; and
- (2) There must be a serious burden on the examiner if restriction is not required.

In this case Species 1: (figures 1, 2, and 6) and Species 2: (figures 3 – 5, and 7) are distinct because they are two different flow charts. Species 1: figure figures 1, 2, and 6 discloses a single ultraviolet device using methods/steps of capturing and manipulating image data using the single ultraviolet detector whereas Species 2: figures 3 – 5, and 7 discloses multiple ultraviolet detectors using methods/steps of capturing and manipulating image data using the plurality of ultraviolet detectors.

The field of searches for these flowcharts is totally different. There must be a serious burden on the examiner if restriction is not required because at least the field of searches for these species is different.

As discussed in the last restriction requirement should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or

clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

The requirement is still deemed proper and is therefore made FINAL.

Also Note: Claims 13 – 17 and 19 – 21 have been withdrawn by the examiner since these claims depend from non-elected species 1 (i.e. claim 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 – 9, 11, and, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iida et al. (US patent No. 7,230,642) in further view of Bilhorn (US patent No. 5,173,748).

Regarding **claim 8**, Iida et al. teaches an object shooting condition judging device comprising: a first light detecting element disposed on a taking lens side of an image shooting apparatus so as to detect received light (figure 3 items 101 photographing environmental light spectral distribution detector and 102 multi-spectral camera); a second light detecting element disposed on a side opposite to the taking lens side of the image shooting apparatus so as to detect received light (figure 3 item 104 observation environmental light spectral distribution detector); comparing means for

Art Unit: 2622

comparing light intensity detected by the first light detecting element and light intensity detected by the second light detecting element, with a first predetermined value, respectively (figure 3 item 103 compares and outputs display data; also figures 15 – 16 calculates change in lighting), and also comparing a difference or ratio between the light intensity detected by the first light detecting element and the light intensity detected by the ultraviolet light detecting element, with a second predetermined value (figure 3 item 103 compares and outputs display data; also figures 15 – 16 calculates change in lighting); and judging means for judging shooting conditions of an object based on the comparison result of the comparing means (figure 3 item 103 compares and outputs display data; also figures 15 – 16 calculates change in lighting).

However lida et al. fails to teach that the light-detecting element is an ultraviolet light-detecting element. Bilhorn, on the other hand teaches that it is well known to a person in the ordinary skill in the art to have a light-detecting element as an ultraviolet light-detecting element.

More specifically, Bilhorn teaches teach that it is well known to a person in the ordinary skill in the art to have a light-detecting element as an ultraviolet light-detecting element (column 1 lines 13 – 25).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Bilhorn with the teachings of lida et al. because as stated in column 1 lines 13 - 25 Bilhorn teaches that using his invention information at multiple wavelengths can be recorded simultaneously. The advantage is proportional to the square root of the number of simultaneous measurements. The

Art Unit: 2622

charge-coupled device (CCD) has become particularly popular as a spectroscopic detector because scientific grade versions of these devices, when operated in slow-scan cameras, provide individual array element sensitivities that rival the best single channel detectors. So when combined with lida et al.'s invention image quality is improved.

Regarding **claim 9**, as mentioned above in the discussion of claim 8 lida et al. in further view of Bilhorn teach all of the limitations of the parent claim. Additionally, when the item 101 of lida et al. is replaced with the ultraviolet light-detecting element of Bilhorn an ultraviolet light-detecting element disposed on a taking lens side of the image shooting apparatus, an ultraviolet light transmitting lens is disposed on an ultraviolet light incident side of the ultraviolet light detecting element is produced.

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Bilhorn with the teachings of lida et al. because as stated in column 1 lines 13 - 25 Bilhorn teaches that using his invention information at multiple wavelengths can be recorded simultaneously. The advantage is proportional to the square root of the number of simultaneous measurements. The charge-coupled device (CCD) has become particularly popular as a spectroscopic detector because scientific grade versions of these devices, when operated in slow-scan cameras, provide individual array element sensitivities that rival the best single channel detectors. So when combined with lida et al.'s invention image quality is improved.

Regarding **claim 11**, as mentioned above in the discussion of claim 8 lida et al. in further view of Bilhorn teach all of the limitations of the parent claim. Additionally, when the item 101 of lida et al. is replaced with the ultraviolet light-detecting element of Bilhorn an ultraviolet light-detecting element disposed on a taking lens side of the image shooting apparatus, the display from item 105 will produce a display unit for displaying ultraviolet light intensity detected by the ultraviolet light receiving element.

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Bilhorn with the teachings of lida et al. because as stated in column 1 lines 13 - 25 Bilhorn teaches that using his invention information at multiple wavelengths can be recorded simultaneously. The advantage is proportional to the square root of the number of simultaneous measurements. The charge-coupled device (CCD) has become particularly popular as a spectroscopic detector because scientific grade versions of these devices, when operated in slow-scan cameras, provide individual array element sensitivities that rival the best single channel detectors. So when combined with lida et al.'s invention image quality is improved.

Regarding **claim 18**, lida et al. teaches an image adjustment device comprising: a first light detecting element disposed on a taking lens side of an image shooting apparatus so as to detect received light; a second light detecting element disposed on a side opposite to the taking lens side of the image shooting apparatus so as to detect

Art Unit: 2622

received light; comparing means for comparing light intensity detected by the first light detecting element with a first predetermined value, the comparing means also comparing light intensity detected by the second light detecting element with the first predetermined value, and the comparing means also comparing a difference between the light intensity detected by the first light detecting element and the light intensity detected by the second light detecting element or a ratio between both intensities to a second predetermined value; judging means for judging shooting conditions of an object based on the comparison result of the comparing means; and adjustment means for adjusting white balance according to the judgment result of the judging means.

However lida et al. fails to teach that the light-detecting element is an ultraviolet light-detecting element. Bilhorn, on the other hand teaches that it is well known to a person in the ordinary skill in the art to have a light-detecting element as an ultraviolet light-detecting element.

More specifically, Bilhorn teaches teach that it is well known to a person in the ordinary skill in the art to have a light-detecting element as an ultraviolet light-detecting element (column 1 lines 13 – 25).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Bilhorn with the teachings of lida et al. because as stated in column 1 lines 13 - 25 Bilhorn teaches that using his invention information at multiple wavelengths can be recorded simultaneously. The advantage is proportional to the square root of the number of simultaneous measurements. The charge-coupled device (CCD) has become particularly popular as a spectroscopic

detector because scientific grade versions of these devices, when operated in slow-scan cameras, provide individual array element sensitivities that rival the best single channel detectors. So when combined with lida et al.'s invention image quality is improved.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over lida et al. (US patent No. 7,230,642) in further view of Bilhorn (US patent No. 5,173,748) in further view of HEINZ (US patent No. 2,987,959).

Regarding **claim 10**, as mentioned above in the discussion of claim 8 lida et al. in further view of Bilhorn teach all of the limitations of the parent claim.

However lida et al. in further view of Bilhorn fail to teach that the ultraviolet light detecting element is constituted by a semiconductor including at least one group III element and nitrogen. HEINZ, on the other hand teaches that the ultraviolet light detecting element is constituted by a semiconductor including at least one group III element and nitrogen.

More specifically, HEINZ teaches teach that the ultraviolet light detecting element (column is constituted by a semiconductor including at least one group III element and nitrogen (column 2 lines 21 – 57; element selected from **boron, aluminum, gallium and indium** [i.e. group 3] with an element selected from **nitrogen**, phosphorus, arsenic and antimony).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of HEINZ with the teachings of lida et al. in

further view of Bilhorn because as stated in column 2 lines 48 - 57 HEINZ teaches that using his invention The outstanding advantage of the AnBv compounds in Faraday-effect devices according to the invention will be realized if one considers that by virtue of the large number of these compounds and the fact that the respective widths of their forbidden zones jointly cover a wide spectral range, virtually the entire infrared, visible and ultraviolet and shorter-wave range of the electromagnetic spectrum can be dominated, encountering only slight gaps.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over lida et al. (US patent No. 7,230,642) in further view of Bilhorn (US patent No. 5,173,748) in further view of Examiners Official Notice.

Regarding **12**, as mentioned above in the discussion of claim 8 over lida et al. in further view of Bilhorn teach all of the limitations of the parent claim.

However, lida et al. in further view of Bilhorn fails to teach that the first predetermined value of ultraviolet light is equal to or more than $10 \mu\text{W}/\text{cm}^2$.

The examiner takes Official Notice that it is old and well known in the art to have a predetermined value of ultraviolet light equal to or more than $100 \mu\text{W}/\text{cm}^2$.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a predetermined value of ultraviolet light equal to or more than $100 \mu\text{W}/\text{cm}^2$ to get a good reading of ultraviolet light indoor or outdoor.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ohsawa (US patent No. 6,856,354) teaches using two different light detectors to adjust display light of camera.


Bechtel et al. (US PgPub 2003/0103141) teaches using two different light detectors to adjust display light of camera.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usman Khan whose telephone number is (571) 270-1131. The examiner can normally be reached on Mon-Thru 6:45-4:15; Fri 6:45-3:15 or Alt. Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2622

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Usman Khan
09/13/2007
Patent Examiner
Art Unit 2622



DAVID OMETZ
SUPERVISORY PATENT EXAMINER